BAE SYSTEMS

ORDNANCE SYSTEMS INC.
Radford Army Ammunition Plant
4050 Pepper's Ferry Road
Radford Virginia 24141

February 04, 2016

Leslie Romanchik
Hazardous Waste Program Manager
Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

Subject: RFAAP Incinerator Permit Application NOD Response
Radford Army Ammunition Plant, Radford, Virginia
EPA ID#: VA1210020730

Dear Ms. Romanchik:

Attached, please find our responses to the notice of deficiency (NOD) issued by the Virginia Department of Environmental Quality (DEQ) December 23, 2015, for the incinerator Resource Conservation and Recovery Act (RCRA) renewal application submitted in April 2012, and the amended versions of that application provided to DEQ on November 16, 2015.

The written responses included as Attachment 1 provide a copy of DEQ's NOD and our response to that NOD. The NODs are provided in *italic* font. RFAAP's response regarding each NOD is provided in standard font. Any changes made to the RCRA permit application as a result of these NODs is provided in Attachment 2.

If you have any questions or concerns regarding our responses, please contact Mr. Matt Alberts at 540/639-8722 (matt.alberts@baesystems.com).

Sincerely,

Jay Stewart for
Environmental Manager
BAE Systems, Ordnance Systems Inc.

Enclosures:

Attachment 1 - Written Description of Application Revisions included with this Submittal
Attachment 2 - Revised sections to the EWI RCRA permit application

c: Russ McAvoy, VDEQ-CO
Ashby Scott, VDEQ-CO

Coordination: J. McKenna
J. McKenna

bc: J. Stewart, BAE Staff
J. McKenna, Army Staff
Matt Alberts, BAE Staff
Michele Gehring, Coterie Environmental
Env. File

16-0900-024

Concerning the following:

RFAAP Incinerator Permit Application NOD Response
Radford Army Ammunition Plant, Radford, Virginia
EPA ID#: VA1210020730

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

SIGNATURE: 

PRINTED NAME: ALICIA M. MASSON

TITLE: LTC, CM
Commanding

SIGNATURE: 

PRINTED NAME: William M. Barnett

TITLE: General Manager
BAE Systems

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Attachment 1

Written Description of Application Revisions included with this Submittal

Comments and responses provided herein reflect those associated with the RCRA Permit notice of deficiencies for which permit application revisions are being submitted at this time. The NODs referenced were provided by DEQ in a letter dated October 26, 2015, and December 4, 2015.

Section 2, Comment 43. The revised language does not address on-site soil contamination as required by the initial comment. RAAP shall revise the language in Section II.E.4 to address on-site soil contamination of hazardous waste.

Section II.E.4 of the revised Attachment II.E included with this submittal has been revised to address on-site soil contamination; Item 2.c has been revised to include soil contamination.

Section 2, Comment 66: RAAP has made a determination on NFPA applicability based off of two previously performed studies, the 1973 Hazards Evaluation of Prototype Incinerator System and the 1981 Hazard Analysis of the Waste Propellant Incinerator yet has not provided the reports to DEQ for evaluation of the determinations made in those reports. RAAP shall submit the reports for DEQ evaluation.

Additionally the analysis did not contain the flash point test results required to demonstrate applicability under NFPA 30 Sections 4.2.2 or 4.2.3 and the corresponding test for liquids with suspended solids in referenced Section 4.4.1.1 and defined in Section 4.4.2, Please provide copies of this analysis to support the determination of inapplicability to NFPA 30.

Unfortunately the referenced hazard evaluations cannot be provided at this time, as they are proprietary documents developed by prior contractors. These documents are, however, available for DEQ inspection onsite.

Flash point studies were not performed on the liquid, as the slurry mixture is ground propellant in water and no flammable or combustible liquids are added to it. The term "flash point" is used to determine the lowest temperature at which a volatile substance can become vaporized into a flammable gas ignited by a flame. With no flammable combustible liquids present, an open or close flash point test was not needed. For the ground propellant to burn (or combust) in the incinerator, most, if not all of the water must be evaporated to allow the propellant to ignite. If the slurry itself had a flash point, this would not be the case.

If DEQ wishes to discuss this issue further, we would discuss scheduling a meeting at the RFAAP with our Explosives Safety Manager, who can walk DEQ through the documents and explain the testing that was performed.

Attachment A, Section 2, Comment 11: Please remove the reference to 9 VAC 20-60-1010.B.7 as this is no longer a valid citation for the Virginia regulations applicable to the contingency plan. All other citations are correct.

The citation has been removed from the revised Attachment II.E included with this submittal.

Attachment A, Section 2, Comment 14: RAAP shall remove the words "if necessary" from the revised permit language as this does not accurately reflect the requested language by DEQ.

Section II.E.6e.ii of the revised Attachment II.E included with this submittal has been revised to remove the parenthetical "if necessary" that was previously included in the text of the second paragraph.

Attachment 2

Revised Sections to the EWI RCRA Permit Application

ATTACHMENT II.E

CONTINGENCY PLAN

ATTACHMENT II.E – CONTINGENCY PLAN

TABLE OF CONTENTS

Comment [RFAAP1]: Due to the more stand alone nature of this attachment, we added a table of contents to the document.

LIST OF FIGURES

LIST OF TABLES

~~The following text was excerpted from RFAAP's January 12, 2001 submittal. The original fomatting and numbering scheme is retained in order to simplify the anticipated inclusion of additional hazardous waste management units (e.g., the Open Burning Grounds).~~

II.E.1 ~~1.0~~ INTRODUCTION ~~AND~~ AND GENERAL INFORMATION (40 CFR §§ 270.14(b)7 and 264.52,9 VAC 20-60-270~~,~~ and 260~~, and 1010.B.7~~)

This Contingency Plan (Plan) has been prepared pursuant to 40 CFR § 270.14(b)(7) for the ~~Waste Propellant Incinerator~~ hazardous waste incinerators and the ~~storage/treatment~~ permitted hazardous waste storage tanks (herein referred to as the Incinerator)~~, permitted treatment and storage units,~~ at the Radford Army Ammunition Plant (RFAAP). This information provided herein is also applicable to the less than 90 day hazardous energetic waste storage areas listed in Appendix II.E-2, as the materials stored at these locations are the same as those stored and treated in the permitted units covered by this Permit. (Note, the list provided in Appendix II.E-2 is a dynamic list and is subject to change as waste generation warrants. Additional less than 90 day storage areas may be created as necessary without modification of this Permit). This Plan has been compiled as a stand~~-~~alone document for the permitted treatment and storage area and has been structured to be consistent with other plans and procedures in use at the RFAAP.

II.E.1a ~~1.1~~ Purpose

In accordance with 40 CFR §§ ~~Subpart D of 40 CFR Part 264~~264.50 through 264.56, this document describes the Contingency Plan that will be activated in the event of a fire, explosion, or release of hazardous waste or hazardous waste constituents~~, which~~ that could threaten human health or the environment. A current copy of the Plan will be maintained in the RFAAP ~~Facility~~ facility ~~Operating~~ operating ~~Record~~ record as well as in the Environmental Manager's files.

The overall objective of this Contingency Plan is to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water. This plan defines the actions to be taken in the event of an emergency within the permitted storage and treatment area. ~~This Plan is designed to address the requirements of Subpart D of 40 CFR Part 264. Management plans, Army installation procedures, and plant operating procedures exist outside the text of this Plan. The purpose of these other documents is to handle emergency situations that might occur at the RFAAP, but that may or may not be directly associated with hazardous waste management. Although these documents are not required under Subpart D of 40 CFR Part 264, and are not part of this Plan, a brief description of the contents of these documents and a listing of the established operating procedures applicable to RFAAP emergency and disaster situations are included in Table 1. Appendix A contains a copy of the table of contents for the RFAAP Disaster Control Plan (RFAAP-DCP) and the Plant Protection Plan.~~

II.E.1b ~~1.2~~ Plan Contents

This Contingency Plan contains pertinent information to be used during an emergency situation and was developed in accordance with 40 CFR § 270.14(b)(7) and the sections referenced herein. The various sections and content of the plan are listed below along with the regulatory provision directing their inclusion.

- Section II.E.2 describes facility operations and the types of hazardous wastes managed at the Incinerator (40 CFR § 264.56)~~.~~;
- Section II.E.3 identifies the RFAAP Emergency Coordinator and alternates (40 CFR §§ 264.52 and 264.55)~~.~~;
- Section II.E.4 discusses Contingency Plan implementation (40 CFR §§ 264.52 and 264.56);~~.~~
- Section II.E.5 presents a description of release prevention measures (40 CFR § 264.56)~~.~~;
- Section II.E.6 describes emergency response procedures (40 CFR § 264.56)~~.~~;
- Section II.E.7 describes coordination agreements between RFAAP and surrounding communities (40 CFR §§ 264.37 and 264.52)~~.~~;
- Section II.E.8 presents the permitted treatment and storage area evacuation plan (40 CFR § 264.52)~~.~~;
- Section II.E.9 outlines release-reporting requirements (40 CFR § 264.56)~~.~~; and
- Section II.E.10 includes requirements for Contingency Plan modifications (40 CFR § 264.53).

II.E.2 ~~2.0~~ FACILITY LOCATION, OPERATIONS, ~~AND~~ AND WASTES MANAGED (40 CFR §§ 270.14(b)7, 264.52(a), and 264.56(b) 9 VAC 20-60-270 and 264)

T~~T~~his section provides background information that may be useful as part of an emergency situation. ~~T~~This information includes the location of the facility, operations performed at the facility, types of wastes managed, and potential emergency situations that could be encountered.

II.E.2a ~~2.1~~ Facility Location (40 CFR § 270.14(b)(7), 9 VAC 20-60-270(B)(9))

The RFAAP is located in southwest Virginia within Pulaski and Montgomery Counties as shown in Figure II.E-1. The RFAAP is located approximately 5 miles northeast of the City of Radford, 10 miles west of Blacksburg, and 47 miles southwest of Roanoke. The main entrance to the RFAAP is located on Virginia Route 114 between the Towns of Christiansburg and Radford. The RFAAP address is as follows:

Radford Army Ammunition Plant
Route 114
P.O. Box 1
Radford, Virginia 24141-0100

The RFAAP encompasses approximately 4,104 acres. The New River separates Pulaski and Montgomery counties and also divides the RFAAP into two portions commonly known as the Horseshoe Area and the Main Manufacturing Area. These two areas and the approximate boundary of the RFAAP are shown on Figure ~~1~~II.E-1.

The Incinerator is located within the north central portion of the Horseshoe Area as shown in Figure II.E-1 and is used for the incineration of ~~waste propellant~~energetic wastes. Figure II.E-2 shows the Incinerator boundary and the locations of the actual structures. Figure

II.E-3 is a schematic diagram that shows how ~~waste propellants~~ the energetic wastes are processed as part of the treatment process.

II.E.2b ~~2.2~~ Facility Operations (40 CFR § 264.52(a), 9 VAC 20-60-264)

General operations performed at the RFAAP and at the permitted treatment and storage area are described in the following sections.

i) ~~2.2.1~~ RFAAP Operations

RFAAP is a government-owned, contractor-operated (GOCO) industrial installation operated by BAE Systems, Ordnance Systems Inc. (BAE) and responsible to the U.S. Army ~~Armament, Munitions and Chemical Command~~. The RFAAP's~~whose~~ mission is to manufacture propellants, explosives, and chemical materials as assigned. ~~The Alliant Ammunitionr and Powder Company, L.L.C. (Alliant) currently is the operator of the facility under a Facility Use contract.~~ As a GOCO operation, RFAAP has both Government and Contractor organizations. For the purpose of this permit application, the facility consists of all contiguous portions of the RFAAP. ~~under the control of the either the U.S. Army or Alliant (Permittees).~~ The facility specifically includes both the Horseshoe Area and the Main Manufacturing area. Wastes from onsite activities (including those of both the operating contractor and tenants) are ~~managed~~ stored and treated in the permitted storage and treatment area. ~~Additionally, wastes from the nearby New River Unit (NRU) are handled at the site.~~

The facility was first constructed in 1940 and began operations producing smokeless powder (single base, double base, and triple base propellants) in 1941. Since that time various processes/products have been added to the facility including production of cast propellants, trinitrotoluene (TNT), commercial propellants, and load, assemble and pack facilities. Specific operations vary based upon contracted capacity and products from the Department of Defense and U.S. allies.

ii) ~~2.2.2~~ Incinerator Operations

Operations included in the permitted storage and treatment area~~as part of the Incinerator~~ include grinding, tank storage ~~and treatment~~, and incineration equipment. The primary structures included in the permitted storage and treatment area are as follows:

- The Grinder Building (identified as Building/Account No. 442), where wastes are ground into small pieces prior to being mixed into the slurry and incinerated. The Grinder Building houses the two permitted hazardous waste storage tanks.
- Incinerators 440 and 441 (identified as Accounts 440 and 441), where the slurried wastes are treated in accordance with this Permit and the Hazardous Waste Combustor National Emission Standards for Hazardous Air Pollutants.

~~• Grind Houses (Structures 430 and 442)~~
~~• Control Houses (Structures 431 and 447)~~
~~• Incinerator Buildings (Structures 440 and 441); and~~

- ~~Ancillary Buildings (Structures A-440, B-440, and A-441~~

The following areas are specifically excluded from the "permitted ~~treatment and~~ storage and treatment area" (refer to Figure II.E-2 for structure designations) as these are included in the USEPA RCRA Corrective Action Permit or were closed under previous closure plans administered by the DEQ:

- Settling Ponds #1 and #2 (identified as Accounts 445 and 446), which are included as Solid Waste Management Unit (SWMU) No. 39 in the USEPA RCRA Corrective Action Permit;
- Incinerator Fuel Oil Storage Units, including Structures 432 and 443, which were underground storage tanks used for fuel oil storage and were previously closed under a plan administered by the DEQ;
- Spray Pond (identified as Account 444), which was identified as Hazardous Waste Management Unit (HWMU) No. 39 and was previously closed under a plan administered by the DEQ; and
- Ancillary Building A-444, which served as the pumphouse for the spray pond and was previously closed under a plan administered by the DEQ.

In addition to these areas, there are several other structures in the general vicinity of the incinerators that are not included in the permitted storage and treatment area because they are not used to accumulate waste for periods greater than 90 days. These buildings and structures include:

- The incinerator control room and adjacent supply area (identified as Buildings 431 and 447);
- Temporary waste accumulation area (identified as Building 430), which is used to accumulate wastes for < 90 periods prior to treatment in the incinerator; and
- Ancillary buildings in the incinerator complex that store supplies and/or instrument equipment and calibration gases (identified as Accounts A-440, B-440, and A-441).

In addition the buildings referenced above, numerous temporary energetic waste storage locations (less than 90 day areas) are located throughout the RFAAP. Although these storage buildings are not included in this Permit, the wastes stored within them and the procedures to be used in responding to emergencies at them are consistent with the wastes and procedures therein. Therefore, this Contingency Plan is intended to cover both the permitted storage area and the temporary storage locations indentified in Appendix II.E-2. ~~Structures that are specifically excluded from the Incinerator include the following:~~

- ~~Incinerator fuel oil storage units (including Structures 432 and 443)~~
- ~~Spray pond (Structure 444)~~
- ~~Settling ponds #1 and #2 (Structures 445 and 446); and~~
- ~~Ancillary Building (Structure A-444).~~

~~The Spray Pond has been clean closed for soils by the VDEQ and Settling Ponds #1 and #2 are currently managed through the U.S. Environmental Protection Agency (EPA).~~

Specific operations that are performed at the Incinerator are ~~listed~~ described below. Figure~~-~~ II.E-3 is a schematic diagram that shows how the waste~~s propellants~~ are processed as part of the treatment process.

1. Waste materials are transported from production areas in < 20 gallon containers to a~~n~~ < 90 day accumulation area at Building 430 or Building 4601-7. (Note: the wastes are accumulated for less than 90 days and therefore these buildings ~~is~~ are not ~~a~~ permitted container storage facility ~~for these containers~~ies).

2. At the Grind House (Building 442) the ~~waste propellant~~ energetic waste is loaded ~~into~~ onto a trolley, ~~and~~ dumped into a hopper, and fed onto a conveyor. The material is sprayed with water to minimize the chance of a waste explosion. Oversize and metallic materials are removed from the waste stream on the conveyor ~~which is~~ and ~~then~~ dropped into the grinder feed hopper. Again the waste is sprayed with water to minimize the potential for an explosion. The waste is then ground and added to one of two slurry tanks. In the slurry tanks the waste is mixed with water to form a slurry for incineration. These slurry tanks are not completely emptied every 90 days; therefore, these tanks have been permitted as ~~>~~greater than 90 day hazardous waste storage tanks ~~storage permit is being sought for the slurry tanks in the Grinder Building~~.

3. The waste slurry is circulated through a piping system to the incinerators' feed pump house and back to the slurry tank to prevent settling and build up of solids in the lines. Portions of this flow are directed from the feed pump house to the incinerators for treatment.

4. Residue from the ~~incinerators~~ incineration system is collected in ~~an~~ ash ~~buggy~~buggies and drums and is accumulated. The ash is staged on-site pending sample analysis and is then disposed~~al~~ in a properly permitted disposal facility. ~~Residue is also collected from the Bag House and evaporative cooler.~~

~~**2.2.3 Reserved**~~

II.E.2c ~~2.3~~ Wastes Managed (40 CFR § 264.56(b), 9 VAC 20-60-264)

The wastes that are stored and treated in accordance with this Permit are hazardous due to their ignitability (D001), reactivity (D003), and/or toxicity for certain metals and organics. Only those hazardous wastes that are within the specifications of the facility's RCRA Permit and this Waste Analysis Plan will be stored and treated in the permitted storage and treatment area. Neither radioactive wastes, nor mixed radioactive and hazardous wastes, nor wastes that are listed pursuant in 9 VAC 20-60-261, incorporating 40 CFR 261.31, 32, and 33 by reference, will be stored or treated at the permitted treatment and storage areas.

In general, the wastes that are stored and treated at the incinerator area include wastes that exhibit the following hazardous characteristic(s);

i. Reactivity (hazardous waste number D003) as specified in 9 VAC 20-60-261, incorporating 40 CFR 261.23 by reference; or

ii. Toxicity, as specified in 9 VAC 20-60-261, incorporating 40 CFR 261.24 by reference, for one or more of the following contaminants:

a) Arsenic (hazardous waste number D004);
b) Barium (hazardous waste number D005);
c) Cadmium (hazardous waste number D006);
d) Chromium (hazardous waste number D007);
e) Lead (hazardous waste number D008);
f) Mercury (hazardous waste number D009);
g) Selenium (hazardous waste number D010);
h) Silver (hazardous waste number D011); and
i) 2,4-Dinitrotoluene (hazardous waste number D030).

iii. Ignitability (hazardous waste number D001) as specified in 9 VAC 20-60-261, incorporating 40 CFR 261.21 by reference.

Comment [RFAAP2]: This description of the wastes was managed to match those changes provided to Attachment II.B, the Waste Analysis Plan. The two sections now mirror one another.

A specific list of those wastes permitted for storage and treatment at the incinerator area is provided in Table II.E-1. As shown in the table, the wastes are classified into one of 19 different waste groups that are described in detail in the Waste Analysis Plan in Attachment II.B. These group numbers were assigned as the information on the waste groups was collected. There is no significance to the order of the group numbers in Table II.E-1. ~~The hazardous wastes that are managed (treated and stored) at the permitted facility include waste propellants energetic materials and spill "cleanup" residues generated at the facility or the nearby NRU. These wastes which are hazardous due to their ingnitability (D001) and/or reactivity (D003). Additionally, some of the wastes may exhibit the toxicity characteristic for certain metals and/or 2,4-dinitrotoluene. A detailed description of the wastes is provided in the Only hazardous wastes identified in this Permit's Waste Analysis Plan in Attachment II.A of the Permit.will be treated or stored at the Incinerator. These wastes include the following:~~

~~1. Wastes which exhibit only the following hazardous characteristic(s):~~

~~a. Reactivity (hazardous waste number D003) as specified in 9 VAC 20-60-261; 40 CFR Part 261.23;~~
~~b. Reactivity (hazardous waste number D003) as specified in 9 VAC 20-60-261; 40 CFR 261.23 and the characteristic of toxicity, as specified in 9 VAC 20-60-261; 40 CFR 261.24, for one of the following constituents:~~

~~i. Lead (hazardous waste number D008);~~
~~ii. 2,4-Dinitrotoluene (hazardous waste number D030); and/or~~
~~iii. Barium (hazardous waste number D005)~~

~~c. Ignitability (hazardous waste number D001) as specified in 9 VAC 20-60-261; 40 CFR 261.21. Ignitable wastes are limited to clean up residue of~~

propellant ingredients. Ignitable wastes are mixed with sawdust and are not a liquid when brought to the permitted treatment and storage area.

2. Wastes which are not listed pursuant to 9 VAC 20-60-261; 40 CFR 261.31, 32, and 33; and

3. Wastes which are one of the following (as identified in the Waste Analysis Plan):

   a. Off-specification propellants and propellant intermediates, generated at the facility;
   b. Liquid wastes, consisting of water and diethylene or triethylene glycol;
   c. Load, assemble and pack waste, consisting of energetic materials from assembling cartridges;
   d. Specialty product wastes containing propellant with nitrocellulose, nitrate esters, nitroguanidine, solid explosives, and one of the following combinations of additional materials:
      i. 40 CFR 261 Appendix VIII constituents (D003)
      ii. 40 CFR 261 Appendix VIII constituents, chlorides and/or perchlorates (D003)
      iii. 40 CFR 261 Appendix VIII constituents and/or metals (D003, D004-D010)
   e. Other miscellaneous waste, described in Module II, Attachment II.B, Appendix II.B-1, Table I, as one of the following:
      i. Ignitable and reactive liquids in sawdust (D001, D003)
      ii. Propellant laboratory waste (D003, D008, D030, D004)
      iii. Pit cotton (Waste Nitrocellulose)
      iv. Dinitrotoluene and Trinitrotoluene Wastes from manufacturing that are not listed wastes

i) 2.3.1 Composition of Waste

Comment [RFAAP3]: Modified this section to be consistent with the corresponding section in the WAP.

The composition of the waste propellant mixtures wastes fed to the Incinerator varies over time due to changes in the production schedule at the RFAAP. Generally, these wastes include Off-specification propellants and propellant intermediates, dinitrotoluene (including production intermediates), liquid wastes, load, assemble and pack waste, specialty product waste and other miscellaneous energetic wastes are the categories of wastes which may be stored, treated and incinerated at the Incinerator. These wastes may be hazardous due to the ignitability, reactivity, or toxicity characteristics. . These categories are segregated into However, all of the wastes can be categorized into one of the 19 distinct waste groups identified in , as listed in Table II.E-21; all wastes that are stored, treated, and incinerated at the facility fall into one of these groups.. This table identifies each waste group number and specifies the RCRA hazardous waste codes that may be applicable to that group. Information on the 40 CFR Part 261 Appendix VIII constituents that may be present in each group is provided in Table II of Appendix II.B-1.

These waste streams are processed as described in Sections 2.2.2 and 2.2.3 and are handled in accordance with the Waste Analysis. There are no wastes managed in the facility permitted storage and treatment area that are incompatible with the waste propellants (reactive

~~waste) with one another.~~ If the Permittees wish to store or treat waste whose formulation is not consistent with one of the groups identified in Table II.E-1 in the permitted storage and treatment area, the Permittees will submit a request for permit modification.

ii) ~~2.3.2~~ Identification and Quantity of Waste

~~Hazardous wastes treated at the Incinerator consist primarily of off-specification/waste propellants as described above.~~ The specific identification of wastes to be stored and treated at the permitted storage and treatment area(s) is recorded on an internal manifest form that accompanies the waste from the generation area. This permits easy identification of any material that is released.~~Consequently, the identity of any released material can be identified.~~ In the event of a release, the information provided on this internal manifest and corresponding waste tag will be the primary means for identifying the material that has been spilled or otherwise released. These internal manifest forms and tags accompany each container of waste that is generated and transferred within the RFAAP. Should material from a slurry tank, the slurry loop, or the incinerator be released, information from the grind makeup sheet will be used to identify the materials that were present in the tank or piping at the time of release.

The quantity and location of hazardous wastes that are maintained on-site at the Incinerator are listed below:

- 3,~~400~~ 800 gallons of waste slurry in two 1,~~700~~ 900 gallon hazardous waste storage tanks;
- Accumulated waste awaiting processing in the grinder (quantity varies based on production schedule); and
- Potentially hazardous ash (quantity varies depending on wastes treated).

II.E.2d ~~2.4~~ Potential Emergency Situations
(40 CFR § 264.52(a), 9 VAC 20-60-264)

There are several situations that could lead to the release of hazardous waste at the Incinerator area that would require implementation of the Contingency Plan. The most common scenarios that could lead to such a release of hazardous waste are listed below:

1. Release of waste slurry due to slow leak or failure of slurry tanks, ~~and/or related~~slurry piping, and/or slurry pump failure.
2. Release of liquid wastes during transfer to slurry tanks.
3. Release of solid waste during transfer or processing ~~at Grind Houses or during processing in Grind Houses.~~in the Grinder Building, such as that resulting from a waste conveyor system failure.
4. Release as the result of a fire or an explosion of reactive wastes during processing or handling, such as that which could result from metal entering the grinder due to a metal detector failure.

The most serious situation at the Incinerator would be an explosion, as such an incident would pose an immediate danger to facility personnel and could allow for the release of a significant quantity of material. A non-explosive release of waste at the Incinerator presents less

of an immediate danger to personnel, but response measures are still important as a safety issue for facility personnel and as a long-term issue for protection of human health and the environment.

II.E.3 ~~3.0~~ EMERGENCY COORDINATORS
(40 CFR §§ 270.14(b)7, 264.52(d), and 264.55, 9 VAC 20-60-270 and 264)

The primary Emergency Coordinator (EC) for all environmental emergencies is the on-call representative from the Environmental Department. Additionally, the facility ~~/~~Incident Site Commander (~~EC/~~ISC) will provide coordination of emergency response such as fire protection, medical attention, *etc*. ~~at the facility is the Plant Protection Specialist on duty.~~ The EC~~/ISC~~ has the authority to determine and implement ~~the Disaster Control Plan, RFAAP Hazardous Material Emergency Response Plan, and Plant Protection Plan as well as~~ this Contingency Plan and commit the necessary resources to do so. The EC will receive assistance in these duties from the ISC where appropriate ~~if deemed necessary~~.

The facility has an on-site Fire Department and Hazardous Materials Emergency Response Team. Environmental emergencies are primarily communicated to and handled by the Environmental Manager and the Environmental ~~Engineering~~ Staff in accordance with applicable regulations. The Environmental Manager coordinates all pollution control and remediation activities including monitoring, containment, control, countermeasures, clean-up, and disposal activities. ~~The Environmental Manager and the EC/ISC also have the authority to commit all necessary resources to carry out emergency response under this plan.~~

Other facility employees are designated as alternate EC~~/ICSs~~ and are qualified to act as EC in event the primary EC is unavailable. A (primary or alternate) ~~emergency coordinator (~~EC~~)~~ will be available or on call at all times. The facility personnel who are designated as ECs are listed in Table II.E-~~3 1~~2 (the Notification Action Summary sheet). The alternate ECs are called on ~~in the order listed~~ to act as the EC in the event of an emergency in the order listed in the table.

Table II.E-~~3 1~~2 also lists the names, addresses, and phone numbers (office and home) of the ~~emergency coordinators~~ ECs and alternate ECs. All of these persons are qualified by experience and training to act as ~~Emergency Coordinator~~the EC. All of these persons hold management positions at the facility, ~~and~~ have been trained to respond to emergencies dealing with hazardous waste management, and have extensive experience in the propellant manufacturing environment.

II.E.4 ~~4.0~~ IMPLEMENTATION
(40 CFR §§ 270.14(b)7, 264.52(a), and 264.56(d), 9 VAC 20-60-270 and 264)

The Contingency Plan will be implemented whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents~~, which~~that could threaten human health or the environment. The EC will be responsible for evaluation of any situation to determine if the Contingency Plan will be implemented. Situations that could require implementation of the Contingency Plan include:

1. Fire and/or Explosion - The primary hazards that accompany explosions and deflagrations are blast overpressure, fragmentation (primary and secondary), and thermal effects. Such instances would require implementation of the Contingency Plan if:

a. A fire causes the release of toxic fumes.
b. The fire spreads and could possibly ignite materials at other locations onsite or could cause heat-induced explosions.
c. The fire could possibly spread to off-site areas.
d. Use of water or water and chemical fire suppressant could result in contaminated run-off.
e. An imminent danger exists that an explosion could ignite other hazardous waste because of flying fragments or shock waves.
f. An imminent danger exists that an explosion could ignite other hazardous waste at the facility.
g. An imminent danger exists that an explosion could result in release of toxic material.
h. An explosion has occurred that has released toxic material.

2. Spills or Natural Release

a. The spill could result in release of flammable liquids or vapors, thus causing a fire or gas explosion hazard.
b. The spill could cause the release of toxic liquids or fumes.
c. The spill can be contained onsite, but the potential exists for ~~groundwater~~ contamination of the soil or groundwater.
d. The spill cannot be contained onsite, resulting in offsite soil contamination and/or ground or surface water contamination.

~~———~~It shall be the duty of all facility personnel to follow the direction of the EC when the decision has been made to implement the Contingency Plan.

~~4.1 Implementation at the Incinerator~~

The person observing an emergency situation at the Incinerator will most likely be someone other than the EC. That person is to take the following actions to involve the EC as soon as possible:

1. Ensure his/her personal safety.

2. Activate the emergency warning alarm system if the incident occurs at ~~Building 442 (Grind House)~~ the Grinder Building (Bldg. 442) or immediately notify the EC if it is at a location other than Building 442.

3. Telephone, radio, or otherwise notify the ~~Control House~~ control room of any observed releases (*e.g.*, spills, fires, or explosions) ~~at the Incinerator area~~ and report: his/her name, location, and nature and extent of the release. The ~~Control~~

~~House~~ control room personnel will immediately notify the Security Dispatcher and the Foreman. The Security Dispatcher will immediately notify the EC.

4. Remain available to assist the EC with information about initial observations of the incident.

~~5. The EC will determine whether the Contingency Plan should be implemented.~~

~~**4.2 Reserved**~~

II.E.5 ~~5.0~~ RELEASE PREVENTION MEASURES AND CONTROL PROCEDURES (40 CFR §§ 270.14(b)7, 264.52(a), and 264.56(e), 9 VAC 20-60-270 and 264)

RFAAP has general facility-wide control procedures to minimize the potential for fires, explosions, and chemical releases as part of overall facility operations. Additional measures have been implemented at the Incinerator to prevent and/or control the propagation of such incidents.

II.E.5a ~~5.1~~ RFAAP Control Procedures (40 CFR § 264.52(a), 9 VAC 20-60-264)

The RFAAP is designed so that process, raw material storage and product storage facilities present a minimal threat of fire, explosion or material release. These process and storage operations are not subject to RCRA regulation. However, in the course of normal operation and maintenance, hazardous wastes are generated. Because safeguards exist for the non-RCRA regulated processing operations, this also protects against hazards once the waste is generated in the plant.

In the event of a ~~The facility has provisions for response to~~ fire~~s~~, explosion~~s~~ or spill~~s~~ involving hazardous waste, ~~as follows: T~~the EC will notify the ~~on-site supervisor~~area foreman to direct personnel to contain, absorb, package, or redirect spilled materials as deemed necessary to protect human health or the environment. For this purpose, the plant maintains an adequate supply of hand and motorized tools and clean, empty containers for recovering ~~waste propellants and other~~ spilled hazardous wastes.

The EC has the authority to direct ~~, through the on-site plant fire chief,~~ trained fire crews to contain and control fires and cool affected areas to prevent ~~spread of~~ further spread of hazard. This direction shall be coordinated through the onsite plant fire chief.

II.E.5b ~~5.2~~ Incinerator Operating Procedures (40 CFR § 264.52(a), 9 VAC 20-60-264)

Standard operating procedures for the operation of the Incinerator include provisions for monitoring and shutdown of the treatment and processing equipment. Process operations are monitored remotely from the control room and include safety features to ensure safe operation of the unit. Should an emergency situation occur at the incinerator, the system will be shutdown to

prevent danger to human health or the environment. ~~Depending on the location and nature of the emergency, the Incinerator units may remain in operation to continue treatment of waste and residual within the Incinerator units themselves.~~

II.E.5c ~~5.3~~ Prevention of Recurrence or Spread of Fires, Explosions or Releases (40 CFR § 264.56(e), 9 VAC 20-60-264)

Numerous precautions are taken at the permitted ~~TSDF~~ storage and treatment area ~~in order~~ to reduce the likelihood that fires, explosions, or other unsafe conditions occur. These precautions take the form of engineering controls and procedural methods to either help prevent a fire or reduce the spread or damage caused by it. ~~are incorporated into the standard operating procedures for the area and the include general response to procedures for responding to fires at the Incinerator, as well as procedures for the Grind House (management of waste slurry) and procedures for the Incinerator units.~~A summary of these procedures is provided in the section that follows.

Sprinklers, when activated ~~in an emergency~~, automatically provide notification ~~also activate alarms connected~~ to the RFAAP Fire Department. These sprinklers are activated automatically if a fire is sensed and may also be manually activated by the operators if necessary. In addition, ~~F~~fire extinguishers are ~~also~~ on hand for immediate use (refer to Section II.E.6~~.3~~c of this Plan for a complete list and location of available emergency equipment).

Barricades at the ~~tank~~ grinder and incinerator buildings have been designed in accordance with DOD standards to help prevent the propagation of explosions due to flying fragments impacting nearby operations at the facility. In addition, a number of measures have been implemented to prevent and/or control the spread of fires, explosions, or other releases ~~at the Grind House~~ as noted below:

1. The waste slurry stored ~~d~~ in the tanks and pipes is an aqueous solution of ~~waste propellant~~energetic wastes. The grinding of the waste ~~propellants~~ energetic to form an aqueous slurry helps prevent the occurrence of fires and explosions. This also allows for a closed loop feed system to the incinerators ~~which~~ and minimizes the operator handling of the waste ~~propellants~~materials.

2. Operating procedures for shutting down the grinder are part of the facility's plant emergency procedures. These procedures are designed to help prevent the release of ~~waste propellants and/or propellant slurry~~ hazardous wastes should a system upset ~~of~~ or malfunction occur.

3. Secondary containment systems for the two hazardous waste slurry tanks (described in Section II.E.6~~6.5.1c~~) help prevent any released material from entering the environment.

4. Process equipment in the Grinder Building ~~442~~ includes a grinder fail-safe system, which flushes the slurry lines with water in order to clear the lines of residual slurry. The fail-safe system is activated in the event of either a process air system or electrical shutdown. (Compressed air is used to operate several

pneumatically actuated valves within the Building.) Thus, if the facility operations are stopped, the lines will be cleared of ~~propellant~~ waste slurry and slurry from the tanks will be collected in the containment system. After the slurry lines flush, the operators ~~will~~ turn off the fail-safe system, evacuate to the control room, and monitor the fail-safe system and incinerator controls during an emergency response.

The incinerators have built-in safeguards against equipment failure during emergency conditions. These safeguards help prevent fires, explosions, ~~or~~and the release of ~~propellant~~ waste slurry. The following conditions will trigger an emergency shutdown of the incinerator~~Safeguards consist of an alarm horn that will sound under the following conditions~~:

- The control system fails;~~The incinerator burner stops burning;~~
- An electrical power failure occurs;
- The induced draft fan fails;
- The kiln stops rotating;
- ~~When safety interlock feed pump~~
- The~~s,~~ cooling and recirculating pump fail-safe systems activate;
- The ~~, and/or~~ air compressor fail-safe system ~~are~~ is activated; ~~or~~
- A ~~H~~high temperature (safety) limit is reached in the kiln, afterburner, or evaporative cooler.

Should there be a fire, explosion, or release of hazardous materials at the Incinerator, the EC and other environmental and operational personnel will review the incident after response and clean-up activities are completed. Based on this review, the cause will be determined, if possible, facility operating procedures or design will be revised as necessary, and other corrective actions will be taken in order to help prevent a reoccurrence. The Contingency Plan will also be revised as necessary ~~in order~~ to improve facility response to future incidents.

II.E.6 ~~6.0~~ EMERGENCY RESPONSE PROCEDURES (40 CFR §§ 270.14(b)7, 264.52, 264.55, 264.56, 264.71, and 264.196, 9 VAC 20-60-270 and 264)

This section outlines procedures to be followed during an emergency. Information on the EC responsibilities, the required notifications, control, cleanup, and mitigation procedures is presented. Specific emergency response procedures for each hazardous waste management area are provided in Appendix II.E-3. ~~situation including the following information:~~

- ~~The responsibilities of the EC;~~
- ~~Notification procedures for facility personnel and regulatory agencies; and~~
- ~~Various procedures for responding to and controlling an emergency situation.~~

II.E.6a ~~6.1~~ Emergency Coordinator's Responsibilities (40 CFR §§ 264.52(d) and 264.55, 9 VAC 20-60-264)

When the decision has been made to implement the Contingency Plan, the ~~Emergency Coordinator~~EC's~~'s~~ responsibilities will include, but will not be limited to, the following:

1. Identifying hazardous materials and assessing hazards;
2. Accounting ~~of~~ for facility personnel;
2. ~~Implementation~~ Implementing ~~of~~ internal notifications;
3. Coordinating~~on of~~ first-aid activities;
4. Controlling and monitoring site conditions;
5. ~~Activation~~ Activating ~~of~~ the Evacuation Plan, if required; ~~and~~
~~5~~6. Notifying~~ication of~~ appropriate State and local authorities (coordinated ~~notification requirements~~ with the Environmental Department); ~~.~~
7. Coordinating the storage, treatment, and disposal of released material; and
8. Providing post-emergency management.

II.E.6b ~~6.2~~ Notifications (40 CFR § 264.56(a), 9 VAC 20-60-264)

Procedures for the notification of RFAAP personnel and appropriate federal, state and local agencies are included in this section. The Notification Action Summary is provided in Table II.E-~~3 1~~2 of this Contingency Plan. Should the EC be offsite at the time of the emergency, these notifications shall be made by the designated alternate EC or another onsite designee.

i) ~~6.2.1~~ Internal RFAAP Notifications

Internal communication systems (telephone or two-way radios) will be used to notify RFAAP personnel. The appropriate alarms will be activated and the EC will be notified in an effort to implement the Contingency Plan as outlined in Section II.E-4~~.0~~.

ii) ~~6.2.2~~ Notification of Federal, State, and Local Agencies

The Environmental Manager (or a designated alternate) will notify appropriate state and local agencies as outlined in this plan and as listed below.

~~***Release Greater Than Reportable Quantity:*** State and federal regulations require immediate notification whenever there is a release of a hazardous substance greater than a reportable quantity as listed in 40 CFR 302.4. The list on the following page are the substances that are at RFAAP that have an RQ. Not all of the substances listed are at the incinerator or burning ground but are on site.~~

Comment [RFAAP4]: Modifications were made to this section to address RCRA concerns only. Other notification requirements outside those in the RCRA regulations have been removed.

CHEMICALS AND SUBSTANCES			
Chemical	**Reportable Quantity (lbs.)**	**Chemical**	**Reportable Quantity (lbs.)**
Acetone	5,000 lbs (755 gal)	**Nitric acid (any percentage)**	**1,000 lbs (80 gal @ 100% conc.)**
Ammonia (anhydrous)	**100 lbs**	Nitroglycerin (NG)	10 lbs (<1 gal)
Chlorine	**10 lbs**	Petroleum products (oils, fuels, used or waste products)	150 lbs (25 gallons to land)
Dibutyl phthalate (DBP)	10 lbs (1 gal)	Petroleum products (oils, fuels, used or waste products)	Visible sheen on outfall or river
Diethyl phthalate (DEP)	1,000 lbs (100 gal)	Phosphoric acid	5,000 lbs (329 gal @100% conc.)
Ethyl ether	100 lbs (17 gal)	Sodium hydrosulfide	5,000 lbs
2,4 dinitrotoluene (DNT)	10 lbs	Sodium hydroxide (any solution)	1,000 lbs (100 gal @20% caustic)
Lead	10 lbs	**Sulfur dioxide**	**500 lbs**
Mercury	1 lb (1.3 ounces)	**Sulfuric acid (any percentage)**	**1,000 lbs (66 gal @ 100% conc.)**
Mixed acids (any percentage)	**1,000 lbs (80 gal)**	Toluene	1,000 lbs (138 gal)
OTHER HAZARDOUS SUBSTANCES, WASTES, OR AIR EMISSIONS			
Sludge from Bioplant	10 lbs	Wastewater with a pH of ≤ 2.0 or pH ≥ 12.5	100 lbs (12 gal)
Sludge from NG Pre-Treatment Plants	10 lbs	DNT Contaminated Wastewater	225 lbs (27 gallons)
Waste propellant	100 lbs	Visible air emissions for > 1 hour	---
Ash from Propellant and Contaminated Waste Incinerator	10 lbs	Any other material identified as hazardous waste	---

Note: Chemicals in bold print are "OSHA Extremely Hazardous Substances" and require special consideration of health effects in emergency response efforts.

~~1. The National Response Center (800-424-8802) must be notified of any release greater than a reportable quantity in accordance with Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and as listed in 40 CFR Part 302.~~

~~2. The Director of the Virginia Department of Environmental Quality must be notified within 24 hours of any release of hazardous waste in a quantity greater than the Reportable Quantity.~~

~~***Release That Threatens Off-Site Impacts:***~~ In the event that a release occurs that could threaten human health or the environment outside the facility,~~Pursuant to 40 CFR 264.56(d), if the Emergency Coordinator determines that the facility has had a release, fire, or explosion, which could threaten human health or the environment outside the facility, he~~ the EC shall report his/her findings as follows pursuant to 40 CFR 264.56(d). Accordingly, ~~:~~

~~1. If his assessment indicates that evacuation of local areas may be advisable, he shall immediately notify appropriate local authorities. He shall be available to help appropriate officials decide whether local areas should be evacuated; and~~

~~2. He shall immediately notify the local government official designated as the on-scene coordinator for that area, and the State Emergency Response Team of the Virginia Department of Emergency Management at 800/468-8892.~~

~~3. the EC shall A release that poses an immediate or imminent threat to public health and requires notification of~~ notify:

- ~~t~~The National ~~-~~Response Center at (800) 424-8802;
- ~~-must also be reported to the~~ The Virginia Department of Environmental Quality at (540) 562-6814 or (540) 562-6700~~,~~;
- ~~-~~The Virginia Department of Emergency Management at (800) 468-8892~~,~~; and
- The local emergency planning committee offices as follows:
  - The Montgomery County ~~and the~~ Local Emergency Planning Committee at (540) 382-2951 if the emergency is within Montgomery County; or
  - ~~The~~ The Pulaski County Emergency Management Coordinator at (540) 980-7705 if the emergency is within Pulaski County.~~'s Office.~~
  -

Additionally, if the EC determines that an evacuation of local areas may be advisable, he/she shall immediately notify appropriate local authorities. The EC shall be available to help appropriate officials decide whether local areas should be evacuated.

In the event that an emergency situation occurs that requires notification of outside agencies, the following information shall be reported:

1. Name and telephone number of notifier;

2. Name and address of facility;
3. Date, ~~T~~time, and type of incident;
4. Name and quantity of material(s) involved to the extent known;
5. The extent of injuries, if any; and
6. The possible hazards to human health or the environment outside the facility.

II.E.6c ~~6.3~~ Emergency Equipment Available (40 CFR § 264.52(e), 9 VAC 20-60-264)

The emergency equipment available and "on-call" for use at the unit ~~is listed in MOP 4-27-2. This MOP list, and information obtained from the safety manager and the fire chief at RFAAP,~~ is summarized in Table II.E-~~6 2~~3 and Figure II.E-~~5~~4. The table also provides required specifications on referenced equipment (*e.g.*, fire extinguisher type and volume) when it is defined by the RFAAP safety and/or fire protocols.~~–~~ The numbers (1-12) in Table II.E-~~6 2~~3 indicate the different physical locations and Figure II.E-~~5~~4 shows these locations within the facility.

In addition to the equipment listed in Table II.E-~~62~~3, other fire, personnel protection, and cleaning equipment is available as follows. Fire protection equipment includes sprinkler systems (Building 442), portable fire extinguishers, a mobile carbon dioxide extinguishing system, and fire hydrants near the hazardous waste facilities and at various locations within the plant. Cleaning equipment such as brooms, dustpans, and sawdust is found in the Grinder Building (Building 442). Additional spill cleanup equipment is located in the Roads and Grounds Building (Building 7217).

II.E.6d ~~6.4~~ Containment, Countermeasures, Clean-Up and Disposal (40 CFR §§ 264.56 and 264.196, 9 VAC 20-60-264)

General response measures that will be implemented during an emergency situation at the Incinerator ~~and/or the OG Ground~~ are presented below.

1. ***Ensure Personal Safety, Sound Alarm and Notify Emergency Coordinator*:** Upon identification of a fire, explosion, or other release personnel shall en~~s~~u~~ss~~re their personal safety and then activate the alarm system and notify the EC. The alarm system consists of radio and telephone. Both forms of alarm are accessible at the Incinerator. The alarms will be used to contact the Security Dispatcher, which is staffed 24 hours a day, 7 days a week.

2. ***Evacuation*:** Personnel will evacuate the area as outlined in the Evacuation Plan in Section II.E-8~~.0~~ and as directed by the EC.

3. ***System Shutdown*:** In the event of a fire, explosion, material release or other system ~~upset~~emergency, the incinerator operations will be shut down so that personnel can enter the area to respond.

4. ***Identify the Material(s) Involved*:** The specific identification of wastes will be determined from the internal manifest forms, which identify the materials that are

sent to the Incinerator ~~and to the OB Ground~~. Copies of the manifests are carried in the transport vehicles carrying the waste. Upon delivery to the treatment facility, the manifests are transferred from the transport vehicles and are kept at the Incinerator Control Room ~~or at the OB Ground Trailer, depending on the waste destination~~. ~~In addition, copies of the manifests are kept at the operational office for each accumulation area from which the waste is generated.~~

~~Each waste transport vehicle also utilizes a hazard classification placard system to allow firefighting forces to quickly and easily determine the methods by which any emergency situations involving the waste materials should be handled. A description of the hazard classification placard system is included in Appendix B.~~

5. ***Assessment*:** Upon arrival at the scene, the EC (or the designated alternate) will take control of the affected area including all resources necessary to deal with the emergency. The EC will maintain this authority and control until the emergency has been eliminated and cleanup is complete.

   After taking control of the affected area, the EC will determine the source, extent, and nature of the involved hazardous waste and assess any primary and secondary hazards. Waste generation, source and analytical data are to be used to make this determination. These records shall be kept on-site. The evaluation criteria used by the EC to determine if the Contingency Plan is to be implemented are presented in Table II.E-~~4~~3.4 A logic diagram representing the evaluation process is shown as Figure II.E-~~6~~5.

6. ***Alert Local Authorities for Assistance*:** Should the situation require resources beyond those available at the RFAAP, local fire, police, and/or medical support will be requested as described in Section II.E-7.~~0~~.

7. ***Implement Spill Response Measures*:** Spill response measures will be implemented as outlined in Table II.E-~~5-5~~4 using spill response equipment available at the facility as listed in Table II.E-~~6-2~~3 and materials provided by supporting communities as needed. Response measures include evaluation of safety issues, containment of the release, regulatory notifications, waste treatment, and monitoring. Response measures will be performed by the RFAAP Fire Department and Emergency Response Team under the direction of the EC with assistance from other local agencies as needed.

8. ***~~Storage~~ Accumulation and Treatment of Released Material*:** If a spill or leak occurs in the ~~grinder~~ Grinder ~~building~~Building, the released material ~~(an aqueous waste propellant slurry)~~ will be contained in the secondary containment system. The slurry will drain to a sump ~~from which it is~~ that can be pumped to the catch tank. If ~~waste propellant slurry~~ hazardous waste ~~-~~is released to the ground such as may occur due to a failure in the slurry feed line, applicable spill response measures outlined in Table II.E-~~5-4~~5 will be followed. Recovered energetic waste ~~propellant~~ will be treated at the open burning ground, if appropriate.

Ash from fires will be treated similar to incinerator ash. The ash will be analyzed for reactivity, TCLP toxicity, and other constituents as specified in the Waste Analysis Plan in Attachment II.B of this Permit. If the ash fails for either or both characteristics~~,~~ or is a listed hazardous waste, it will be taken to a RCRA permitted facility. If it is not determined to be a hazardous waste~~does not fail~~, it will be disposed in an appropriately permitted solid waste landfill~~, if such disposal is in accordance with that permit~~.

9. ***Incompatible Wastes*:** There are no wastes ~~managed~~ stored or treated in the ~~facility~~ permitted storage and treatment area that are incompatible with ~~the waste propellants (reactive waste)~~one another. ~~All waste from production propellant operations are treated in tanks and incinerated. Thus~~Therefore, the danger of the mixing of incompatible wastes during cleanup procedures is very unlikely. However, procedures are provided to each of the areas on how to prepare wastes for disposal. These procedures provide information on which wastes are acceptable at each of the two main treatment areas (incinerators and open burning ground) amd directions on segregating those materials that cannot be processed through the incinerators' grinder. In addition, the procedures also provide instruction on how to properly tag and manifest the wastes to ensure they are properly identified and handled appropriately. These internal waste manifests and container tags serve to identify the wastes, their point of generation. Upon receiving the wastes, the incinerator operators inspect the waste containers to confirm that they are properly labeled and manifested. They are also visually inspected to confirm that prohibited materials are not provided in the container.

II.E.6e ~~6.5~~ Incinerator-Specific Response Measures (40 CFR §§ 264.56 and 264.196, 9 VAC 20-60-264)

Specific measures for the ~~grinder~~ slurry tanks and for the incinerators are included in the following sections.

i) Container Spills and Leakage

There are no permitted container storage areas within the RFAAP incinerator complex. However, both the Grinder Building and Building 430 may contain hazardous waste containers that are stored on a temporary basis. In addition, any of the less than 90 day storage areas may hold containers of hazardous waste at any time. In the event that one of these containers should spill or develop a leak, the spill will be immediately contained using sawdust. Ample sawdust will be added to completely absorb all liquid in the spilled materials. After the spill has been adequately contained, the material will be swept up and placed into a new hazardous waste storage container. The container will be labeled to clarify the contents of the container and an internal waste manifest will be completed. The collected material will then either be treated onsite at either the incinerator complex or the burning ground or will be shipped offsite to a properly permitted disposal facility if it cannot be treated onsite. If the spill resulted from a leaking or otherwise defective container, the container will be removed from service and disposed in accordance with all applicable laws and regulations.

ii) ~~6.5.1~~ Tank Spills and Leakage

In the event of a spill or release from the hazardous waste tank system, the released material should be contained in the secondary containment system. Tank level indicators are monitored by operators in the control room. Should indication of a leak or spill be provided, ~~A~~a visual inspection of the area will be conducted immediately. ~~in the event of a leak or spill from the slurry tanks to the secondary containment system~~. Additionally, ~~T~~the secondary containment system is inspected every 24 hours to determine whether any leaks have occurred in accordance with 40 CFR 264.193(c)(3). The containment system in Building 442 consists of the makeup tank and a sump pump drainage system. Liquid or slurry~~, which~~ that collects in the sump~~,~~ is pumped to the exterior catch tank. From there, the liquid can be pumped back into the makeup tank or the slurry tanks, or, can be pumped into a portable tanker truck for accumulation or transfer.

Upon detection and visual inspection of a leak or spill, RFAAP will comply with all applicable requirements of 9 VAC 20-60-264 and 40 CFR 264.196(a) through (f). ~~Waste treatment and incineration~~ Grinding operations will immediately cease, and any leaking tank will be emptied. The spilled or residual waste from the sump, basement of the building, or catch tank will be placed into waste containers and removed. The wastes will either be sent to the open burning ground or placed in the other tank and incinerated when operations are able to resume. Waste will be removed from the tanks, containment system, and/or floor sump within 24 hours. Any leaking tank will be inspected, the cause of the failure determined, and the defect repaired pursuant to the requirements of 9 VAC 20-60-264 and 40 CFR 264.196~~.~~(e), and certified by an independent Virginia registered professional engineer ~~(if necessary)~~ pursuant to 40 CFR 264.196(f) prior to being returned to service. In the event that a repaired tank is returned to service, the Director of the Virginia Department of Environmental Quality must be notified that the repaired tank has been returned to service within seven (7) days. If a leaking tank cannot be repaired, the tank system will be closed in accordance with 9 VAC 20-60-264 adopting 40 CFR 264.196(e) by reference unless any of the following conditions are satisfied:

- If the cause of the release was a spill that has not damaged the integrity of the system, then the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
- If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.
- If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of §264.193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. If a component is replaced to comply with the requirements of this subparagraph, that component must satisfy the requirements for new tank systems or components in §§264.192 and 264.193. Additionally, if a leak has occurred in any portion of a tank system component that is not

readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with §264.193 prior to being returned to use.

In the event of a tank overfill/rupture or pipe rupture, ~~the~~ standard procedures ~~to~~for handlinge an explosive liquid spill ~~(GOP 4-15-53)~~ will be followed. Any contaminated equipment will be decontaminated and reused or decontaminated and disposed of as excess equipment or as hazardous waste, if appropriate. ~~The procedures describing these actions are also found in GOP 4-15-53.~~ Spilled waste collected in containers will receive treatment as soon as one of the explosive waste incinerators is properly operating again. The waste will be ~~stored~~ kept at the facility's container ~~storage~~ management area in accordance with 9 VAC 20-60-262~~;~~ and 40 CFR 262.30 through 34 until the time that treatment begins.

iii) ~~6.5.2~~ Incinerator Spills and Leakage

A release of materials from the slurry loop line or in the area of the ~~waste propellant~~ incinerator may occur due to failure of the slurry line either by rupture or gasket failure. Spill response measures to such an incident are outlined in Table II.E-~~54~~5. ~~-~~The ~~Emergency Coordinator~~EC will direct the spill response program. Procedures are provided in these tables and associated permit paragraphs concerning safety, containment, evaluation, notification, treatment, and monitoring as related to each spill incident.

The perimeter of the concrete slab on which the incinerators are located contains a grated gutter to capture washdown water. Any slurry ~~which~~that ~~-~~may leak onto the slab will be washed into the gutter and will be pumped into the same external catch tank ~~which serves~~ that provides ~~as~~ containment for the Grinder Building (Bldg. 442). Response procedures to leaks or spills outside of the incinerator slab are outlined in Table II.E-~~54~~5. Decontamination and repair of the unit will be accomplished depending on the type of repair required. For example, if welding is required, the material must first be decontaminated with heat. If welding is not required, the material can be decontaminated with water.

II.E.6f ~~6.6~~ Disposal of Miscellaneous Waste and Debris
(40 CFR §§ 264.56 and 264.196, 9 VAC 20-60-264)

Wastes generated as part of a response action will be collected and contained. Those materials that cannot be treated in the incinerator or the open burning area will be characterized and disposed of off-site in accordance with state and federal laws. Such wastes may include but ~~is~~ are not limited to the following:

- Personal protective equipment;
- Plastic sheeting used for decontamination or containment;
- Absorbent materials; and
- Soil and/or water.

II.E.6g ~~6.7~~ Post-Emergency Equipment Maintenance
(40 CFR §§ 264.52 and 264.56(h)(2), 9 VAC 20-60-264)

Post-emergency provisions are designed to prevent recurrence, to clean up and dispose of residuals, to decontaminate equipment, and to provide for personnel debriefing.

The ~~Emergency Coordinator~~EC will take all necessary steps to ensure that a secondary release, fire or explosion does not occur after the initial incident. Procedures that will be carried out in the affected area include:

1. Inspection for any leaks or cracks in pipes, valves, tanks, and incinerators;
2. Inspection for excess heat generation at the incident area; and
3. Isolation of residual waste materials.

All waste ~~propellant~~ energetics and other cleanup residues will be tested for RCRA characteristics and other parameters as necessary to meet waste profiling requirements. The material will then be transported to a RCRA permitted facility should ~~they~~ it be determined to be a hazardous waste. If the residues are determined to be non-hazardous, they will be disposed in a permitted solid waste landfill.

All equipment used during the cleanup will be decontaminated on-site and readied for future use. Site personnel will remove and properly dispose of contaminated clothing as necessary. Fire extinguishers will be recharged, personnel protective equipment will be replaced, and tools will be restocked. Before operations are resumed, all safety equipment will be inspected to be sure that it is fit for its intended use.

II.E.7 ~~7.0~~ COORDINATION AGREEMENTS (40 CFR § 270.14(b)(7), 264.37, and 264.52(c), 9 VAC 20-60-270(B)(9) and 264)

~~———~~ Mutual assistance agreements have been made with the ~~following~~ communities identified in Table 1 of Appendix II.E-1. ~~: Dublin, Fairlawn, Radford, Christiansburg, Riner, Longshop/McCoy, and Blacksburg located near the facility.~~ Copies of the Mutual Assistance Agreements and Supplemental Agreements are ~~included in Appendix C~~maintained onsite in the facility operating record. These mutual assistance agreements pertain to the local fire departments. Furthermore, there is close cooperation between local ~~county~~ law enforcement officials and ~~-~~RFAAP Security personnel for traffic control in the plant area if a significant disaster should occur.

Facility staff will contact selected local and regional entities and authorities that may be involved in an emergency situation according to the anticipated needs at the plant. Personnel from these organizations may be asked to support RFAAP personnel in response to fires, explosions, or chemical releases if RFAAP personnel cannot adequately address the situation internally. Personnel from these agencies will act under the direction of the EC and will be directed and escorted by plant personnel.

Arrangements with local hospitals have also been made through ~~verbal~~ agreements between RFAAP and surrounding medical facilities. Table 2 in Appendix II.E-1 identifies those agreements that are in place. Copies of these agreements are maintained onsite in the facility operating record. ~~Immediate support is available at New River Valley Medical Center (15~~

~~minutes traveling time) and the Montgomery County Community Hospital in Blacksburg (12 minutes traveling time). Helicopter service is available upon request from the New River Valley Medical Center.~~ In addition, the RFAAP medical staff ~~nurses are~~is familiar with the properties of the hazardous wastes handled at the facility and the types of injuries or illnesses ~~which~~ that could result from fires, explosions or releases at the facility, and ~~. There is a reference book, Medical Directives for Occupational Health Nurses, for the local nurses to follow in addition to their experience in anticipation of the RFAAP doctor's arrival or aid from a local hospital. To supplement the aforementioned resources,~~ RFAAP firemen are state-certified emergency medical technicians.

Due to RFAAP's in-house fire department, medical staff, and security force, and the unique wastes to be dealt with, the facility EC will act as the primary authority during emergency situations. RFAAP security personnel are responsible for escorting local fire department and emergency response teams to any emergency site within the plant. Emergency units from ~~off-plant~~ offsite will not be allowed to respond inside RFAAP without an escort. For incidents in the horseshoe area, units from Dublin, Fairlawn, Blacksburg, Riner, Longshop/McCoy, or Radford ~~will~~ may be asked to assemble at Gate 10 or the main gate on Route 114. For incidents in the Main Plant Area and larger incidents in the ~~horseshoe~~ Horseshoe ~~area~~Area, units from Radford, Christiansburg and Blacksburg ~~will~~ may be asked to assemble at the Main Gate on Route 114. Entry to the manufacturing area will usually be through Gate 1.

II.E.8 ~~8.0~~ EVACUATION PLAN
(40 CFR §§ 270.14(b)(7) and 264.52(f), 9 VAC 20-60-270 and 264)~~S~~

~~8.1 Incinerator Evacuation Plan~~

The Incinerator is located within the north central portion of the Horseshoe Area of the facility. This area is an isolated location as shown on Figure II.E-1. The New River acts as a protective barrier on the northern and southern exposures of this area. Thus, if an emergency situation should develop at this area, evacuation of the entire facility is not likely to be necessary. The Incinerator operating personnel should be the only persons immediately endangered during an emergency situation at the facility.

Evacuation procedures for ~~Bldg. 442, Bldg. 440/441, and Bldg. 4601-7, are given in GOP 4-3-2~~the incinerator area direct personnel to assemble at Building 447 (Control Room) in the event of a fire, explosion, or other event in the area. ~~. Evacuation will occur in the event of fires and electrical storms. For electrical storms specifically, evacuation will be conducted as described in the operating procedure. The procedural steps extracted from GOP 4-3-2 are as follows~~Should evacuation of the area be deemed necessary, it will proceed as follows:

1. The grinder operation ~~shall~~ will be shut down ~~during electrical storms~~ and all personnel will ~~remain~~ gather in the control room.
2. Container accumulation area operations shall be stopped and secured. All personnel at the container accumulation area shall return to the ~~Control~~ control ~~Room~~room.
3. ~~The incinerator shall remain operational during electrical storms. (NOTE: This is to complete the treatment of the residual slurry.)~~

~~4.~~3. Propellant feed into incinerators will be stopped. The incinerator slurry feed line will be flushed.
~~5.~~4. Slurry will continue to circulate through loop system.
~~6.~~5. Operations will be resumed when directed by supervisory personnel.

~~There are a minimum of two people and a maximum of five people assigned per shift at the Waste Propellant Incinerator Area.~~ During process operations, the operators are either located in or near the control room~~,~~ or are within the permitted treatment and storage area. Personnel will remain in the control room, an underground, blast-proof facility, during evacuation periods. Communication among the operators will be through existing two-way radio communication systems, telephones~~, in the grinder building (Bldg. 442)~~ or through the warning horn located on the ~~grinder~~ Grinder ~~building~~ Building and activated at the incinerator complex. The small number of people in the area, the accessible communication systems, and the close proximity of the evacuation area help ensure a safe evacuation plan at the permitted treatment and storage area.

In addition to the local communication system at the incinerator, the RFAAP also has a mass notification alarm system that is intended to identify persons within the facility of emergency situations as they occur. Systems are in place to warn facility personnel of the following situations:

- Active shooter situation
- Chemical release
- Fire or explosion
- Lightning warning
- Natural disaster alert

Each type of situation will be communicated through a unique alarm signal over the plant-wide "loud-voice" system. The initial alarm is then followed by a verbal warning message that is broadcast through 12-different speaker stations located throughout the plant. Upon conclusion of any of these emergency scenarios, an all-clear alarm (Westminster chimes) and verbal message will be provided via the same loud voice system.

The primary evacuation route for persons within the permitted treatment and storage area is shown in Figure II.E-~~7~~6. ~~The evacuation location is Building 447, the control room, which is an underground, blast-proof control house.~~ While the primary route for evacuation to the control room is via a ~~This control house is accessible from a~~ direct paved path ~~from Bldg. 442 and Bldg. 440/441~~, ~~. T~~the area surrounding ~~area near~~ the facilities is unoccupied, so alternate evacuation routes from the hazardous waste facilities to the control house may take any number of paths through the grass turf.

~~8.2 Reserved~~

II.E.9 ~~9.0~~ REQUIRED REPORTS
(40 CFR §§ 270.14(b)(7) and 264.56(j), 9 VAC 20-60-270 and 264)

~~Reporting requirements for emergency situations to regulatory agencies and to the U.S. Army are presented in this section.~~

~~9.1 Incident Reports~~

Pursuant to 9 VAC 20-60-264; 40 CFR 264.56(~~j~~i), the time, date, and details of any incident~~, which~~ that requires implementation of the Contingency Plan~~,~~ will be noted in the facility operating record. In addition, within 15 days after the incident, a written report will be submitted to the Director of the Virginia Department of Environmental Quality. The report will include:

1. Name, address and telephone number of the owner or operator;
2. Name, address and telephone number of the facility;
3. Date, time, and type of incident;
4. Name and quantity of material(s) involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to human health or the environment, where this is applicable;
7. Estimated quantity and disposition of recovered material that resulted from the incident; and,
8. Such other information specifically requested by the Director~~, which~~ that is reasonably necessary and relevant to the purpose of an operating record.

Pursuant to 9 VAC 20-60-264; 40 CFR 264.196~~.~~(d), for any tank system or secondary containment, any release to the environment, except as provided in item 1 below, will be reported to the Department within 24 hours of its detection. If the release has been reported pursuant to 40 CFR Part 302 ~~(see Section 6.2 of this Contingency Plan)~~, that report will satisfy this requirement.

1. A leak or spill of hazardous waste is exempted from the reporting requirements of ~~section~~ Section II.E-9~~.0~~ of this Contingency Plan, if it is:

   a. Less than or equal to a quantity of one pound, and
   b. Immediately contained and cleaned-up.

~~2. Within 30 days of detection of a release to the environment, a report containing the following information shall be submitted to the Department:~~

~~a. Likely route of migration of the release;~~
~~b. Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);~~
~~c. Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, this data shall be submitted to the Department as soon as they become available;~~
~~d. Proximity to downgradient drinking water, surface water, and populated areas; and~~

~~e. Description of response actions taken or planned.~~

~~**9.2 U.S. Army Material Command Notification**~~

~~RFAAP also follows U.S. Army Material Command notification procedures. If a release occurs, a report similar to the one required by Federal and State agencies is submitted to the U.S. Army Material Command. The reported information required by 40 CFR 264.56(j) and delineated above shall also be incorporated into the facility's permanent operating record.~~

~~RFAAP will notify the Director and other appropriate Commonwealth and local authorities that:~~

~~1. Cleanup procedures have been completed; and~~
~~2. All emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use prior to resuming operations in the affected area(s) of the facility.~~

II.E.10~~10.0~~ MODIFICATION OF PLAN
(40 CFR §§ 270.14(b)(7) and 264.53, 9 VAC 20-60-270 and 264)

Pursuant to 9 VAC 20-60-264; 40 CFR 264.54, this Contingency Plan is subject to review and amendment, if:

a. The plan fails in an emergency;
b. The facility permit is revised;
c. The facility changes in design, construction, operation, maintenance, or other circumstances; in a way that materially increases the potential for fires, explosions, or releases of hazardous waste constituents; or changes the response necessary in any emergency;
d. The list of emergency coordinators changes; or
e. The list of emergency equipment changes.

When the contingency plan is amended for any reason the Permittees will request a permit modification pursuant to 40 CFR 270.42.

FIGURES

Remove this page and insert the following:

~~—~~Figure II.E-1 – Location of the RFAAP~~Figure 1 from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~

~~———~~Figure II.E-2 – ~~Figure 2 from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~Area Map

~~———~~Figure II.E-3 – ~~Figure 3 from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~Process Flow Diagram

~~—~~Figure II.E-~~5~~-4 – ~~Figure 5 from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~Emergency Equipment Locations

~~—~~Figure ~~6~~ II.E-5 – ~~Figure 6 from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~Contingency Plan Implementation Logic Diagram

~~—~~Figure ~~7~~ II.E-6 – ~~Figure 7 from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~Area Evacuation Routes

TABLES

Comment [RFAAP5]: Many of the changes shown in the following tables were made to be consistent with those tables presented in the post-closure care permit.

TABLE 1

EMERGENCY PROCEDURES

RFAAP Disaster Control Plan (RFAAP-DCP) provides plans for:

1) Equipment and/or facility damage
2) Oil and hazardous substance control
3) Chemical, nuclear or radiological accidents
4) Emergency situation reporting
5) Search and rescue operations
6) Crisis emergency/relocation plan
7) Communications-electronics

Spill Prevention, Control and Countermeasure (SPCC) Plan and Installation Spill Contingency Plan (ISCP) for spills other than hazardous waste described in the Part B permit.

SPCC provides:

1) The location and capacity of tanks containing process materials and wastes
2) A description of equipment and/or operation
3) Spill potential information (types of failure, description of flow, maximum loss anticipated, detection methods, time to reach river)

ISCP is concerned with the recognition, reporting, containment and notification procedures in the event of leaks and spills.

Fire Prevention and Protection Program Describes:

1) Employee and Fire Department personnel responsibilities for fire prevention and protection

2) Inspection and use of equipment and supplies

3) Fire Department training program

4) Building evacuation procedures

5) Annual Fire Prevention and Protection Program

6) Prefire plan and other fire plans

RFAAP Hazardous Material Emergency Response Plan provides:

1) Emergency response notification requirements

2) Training requirements

3) Medical surveillance

4) HAZCOM MSDS information

5) List of hazardous materials at RFAAP

6) PPE selection criteria

7) Available material and equipment

8) Emergency response procedure

9) Incident command structure and response

10) Emergency response guidelines (per chemical basis)

TABLE 1
EMERGENCY PROCEDURES (Continued)

Oil Discharge Contingency Plan provides:

1) Regulated petroleum tank information
2) Emergency notification requirements
3) Worst case discharge information
4) Disaster plan strategies
5) I.D. of natural responses at risk or facilities
6) Oil discharge drills
7) Facility staffing, equipment and material levels and inventories
8) Training requirements
9) Inspection procedures
10) Facility security

Plant Protection Plan (PPP)

Outlines plant protection/security procedures including the security of explosives, intrusion detection systems, protective communications and key and lock control.

Procedures

4-27-2: Maintenance Responsibilities During Disaster and Major Emergencies

Applicable Plant Operating Procedure: Protective Clothing and Equipment

Attachment II.H of this Permit: Flood Proofing/Protection Plans and Specifications and 100-Year Response Procedures

4-15-53: Clean-up and Decontamination of NG/Nitrate Ester and Other Hazardous Spills

4-3-2: Area General Waste Propellant Incinerator Facility

TABLE II.E-~~12~~
WASTE GROUPS BURNED AT THE INCINERATORS
RADFORD ARMY AMMUNITION PLANT

Group No.	Description	Defining Characteristics
1	Miscellaneous Waste	Ignitable and reactive Liquids and Sawdust D001, D003
2	Miscellaneous Waste	Propellant Laboratory Waste D003, D008, D030, D004
3	Miscellaneous Waste	Pit Cotton (Waste Nitocellulose) Solid Waste
4	Miscellaneous Waste	Dinitrotoluene and Trinitrotoluene Wastes from manufacturing that are not listed wastes D030
5	Liquid Waste	Water Containing Triethlyene Glycol Solid Waste
6	Liquid Waste	Water Containing Diethylene Glycol Solid Waste
7	Single Base Propellants	Propellant with Nitrocellulose and Lead D003, D008
8	Single Base Propellants	Propellant with Nitrocellulose D003
9	Single Base Propellants	Propellant with Nitrocellulose and Dinitrotoluene D003, D030
10	Double Base Propellants	Propellant with Nitrocellulose and Nitrate Esters D003
11	Double Base Propellants	Propellant with Nitrocellulose, Nitrate Esters and Perchlorate salts D003
12	Double Base Propellants	Propellant with Nitrocellulose, Nitrate Esters and Lead, D003, D008
13	Double base Propellants	Propellant with Nitrocellulose, Nitrate Esters and Solid Explosives D003
14	Triple base Propellants	Propellant with Nitrocellulose, Nitrate Esters and Nitroguanidine D003
15	Load, Assemble, & Pack Waste	Energetic materials from manufacturing cartridges D003
16	Single Base Propellants	Propellant with Nitrocellulose, Dinitrotoluene and Lead D003, D008
17	Specialty Products Waste	Propellant with Nitrocellulose, Nitrate Esters, Nitroguanidine, Solid Explosives, or Appendix 3.6 Constituents D003
18	Specialty Products Waste	Propellant with Nitrocellulose, Nitrate Esters, Nitroguanidine, Solid Explosives, and Appendix 3.6 Constituents, Chlorides or Perchlorates D003
19	Specialty Products Waste	Propellant with Nitrocellulose, Nitrate Esters, Nitroguanidine, Solid Explosives, and Appendix 3.6 Constituents or Metals D003, D004-D010

TABLE II.E-~~321~~
NOTIFICATION ACTION SUMMARY

ON-SITE Emergency Coordinators

Contacts to be made include:

Emergency Coordinator	Office Phone	Home Phone	Home Address
Plant Security	Ext 7323	NA	NA
Plant Fire	Ext 16	NA	NA
Environmental Emergency On-Call Representative **(Primary EC)**	Cell 230-8970	NA	NA
Safety On-Call Representative (**Alternate EC)**	Security will Contact	NA	NA
Environmental Manager ~~– Paige Holt~~ (**Alternate EC)**	Withheld for security purposes. Security will contact.~~Ext 8658 Cell 540-257-3752 540-961-0907~~		~~4815 Nature's Way Blacksburg, VA 24060~~Withheld for security purposes [1]
Environmental Lead Engineer ~~– Hazardous Waste – Jeremy Flint~~ (**Alternate EC)**	Withheld for security purposes. Security will contact.~~Ext 7668 Pager 540-953-6781 540-381-6207~~		Withheld for security purposes [1]~~1850 Playground Court Riner, VA 24149~~
Safety Manager ~~– Joseph Betteken~~ (**Alternate EC)**	Withheld for security purposes. Security will contact.~~Ext 8781 Cell 540-239-6562 Use cell phone~~		Withheld for security purposes [1]~~7530 Bluffview Drive Radford, VA 24141~~

[1] In order to enhance the protection of defense services and defense articles and protect the unauthorized export of defense information under the International Traffic in Arms Regulations (ITAR), promulgated in Title 22 Code of Federal Regulations (CFR) Parts 120 through 130, the actual contact information of individual persons or contractors in the employ of RFAAP have been withheld from this Permit. This information is readily available for review and inspection at the facility upon request. The relevant data is also readily available to plant security and supervision to respond to an emergency.

ON-SITE Notifications

In addition to the notifications listed above, the EC or a designated representative should provide notification of all major emergencies to the environmental and operations management team.

OFF-SITE Notifications

To be made by the Environmental Manager or a designated representative as needed:

1. Army Administrative Contracting Officer – Operations Division Chief Cell (540) 239-4475
2. Virginia Department of Environmental Quality Blue Ridge Regional Office 540-562-6700
3. National Response Center (for releases above an RQ) 1-800-424-8802

4. Virginia Department of Emergency Management 1-800-468-8892
6. Montgomery County Local Emergency Planning Committee (LEPC) (540) 382-2951
7. Pulaski County Local Emergency Planning Committee (LEPC) (540) 980-7705
8. Emergency Service Resources (Fire, Ambulance, Police) 911
9. Chemtrec 1-800-424-9300~~ON-SITE NOTIFICATION:~~

~~Responsible Unit: Phone Number~~

~~Waste Propellant Incinerator Control House: Extension 7770~~

~~Emergency Coordination~~	~~Office Phone #~~	~~Home Phone #~~	~~Home Address~~
~~Administrative Contracting Officer~~	~~540-639-8647~~		
~~D. D. Facemire Safety Specialist~~	~~540-639-7182~~	~~540-731-1595~~	~~7678 Brandon Road Radford, VA 24143~~
~~J. M. Slaughter Safety Specialist~~	~~540-639-8731~~	~~540-980-4621~~	~~Rt. 1, Box 393 Pulaski, VA 24301~~
~~D. M. Hurley Safety Specialist~~	~~540-639-8313~~	~~540-382-3698~~	~~350 Pepper Street, Crestview #305G Christiansburg, VA 24073~~
~~P. K. McMillian Safety Specialist~~	~~540-639-8671~~	~~540-755-3577~~	~~Box 388 Cana, VA 24317~~
~~T. E. Lawley Security Manager~~	~~540-639-7119~~	~~540-552-7995~~	~~2804 Farmview Dr. Blacksburg, VA 24060~~
~~C. A. Jake Environmental Manager~~	~~540-639-7214~~	~~540-639-6215~~	~~4107 Gedney Park Drive Blacksburg, VA 24060~~
~~J. S. Pack Environmental Engineer~~	~~540-639-8369~~	~~540-639-6675~~	~~2190 Wintergreen Drive Radford, VA 24141~~
~~J. J. Redder Environmental Engineer~~	~~540-639-7536~~	~~540-951-3064~~	~~P. O. Box 10925 Blacksburg, VA 24060~~
~~C. A. Williams Hazard Analysis Supervisor~~	~~540-639-7225~~	~~540-726-2835~~	~~304 W. Westview Narrows, VA 24124~~
~~R. A. Bond Acid Area Manager~~	~~540-639-7393~~	~~540-639-7488~~	~~1234 Shady Grove Road Indian Valley, VA 24105-3047~~

TABLE II.E-~~23~~
EMERGENCY EQUIPMENT LOCATIONS AT RFAAP

Location # on Figure 5	Location Description	Equipment Available [1]
1.	Bldg. 1034, Electric Shop	Rubber gloves and respirators
2.	Bldg. 1039	Self-contained breathing apparatus (2)
3.	Roads and Grounds Bldg	Respirators, goggles, air fed respirators, safety belts, shoe cleats, air compressors (250 and 700 CFM ratings), portable pumps (50, 100, and 700 GPM capacities), cranes, bulldozers, movers, graders, tow tractors, portable electric generators
4.	Bldg. 1908	Absorbent materials and booms
5.	Bldg. 350, Fire Department	Ladder truck, engine, utility truck, brush truck, ATV's, command vehicle, and ambulance.
6.	Bldg. 222	HAZMAT trailer with response gear, special operations trailer, and 2 boats.
7.	Bldg 201, Main Laboratory	Nitroglycerin remover
8.	Warehouse No. 9387-2	Soda ash
9.	Bldgs. 440 and 441 (incinerators)	Fire Extinguishers, eye wash and safety shower, and smoke detectors
10.	Bldg. 442	Telephone access, fire extinguisher, and deluge-type fire suppression system
11.	Bldg 4601-7	Telephone access and spill cleanup equipment

[1] All fire extinguishers located in the permitted treatment and storage area are multipurpose dry chemical type, charged to approximately 9 pounds of pressure.

~~**TABLE 3**~~
~~**NOTIFICATION ACTION SUMMARY (CONTINUED)**~~

~~**OFF-SITE NOTIFICATION**~~

~~**TO BE MADE BY THE ENVIRONMENTAL SUPERVISOR OR STAFF (OR HIS DESIGNATED REPRESENTATIVE).**~~

~~1. ADMINISTRATIVE CONTRACTING OFFICER, RFAAP 540-639-8482 OR 8611~~

~~2. DEPARTMEMT OF ENVIRONMENTAL QUALITY WATER DIVISION 540-562-6700 (DAYS)~~

~~3. DEPARTMENT OF ENVIRONMENTAL QUALITY WASTE DIVISION 540-562-6700~~

~~4. NATIONAL RESPONSE CENTER 1-800-424-8802~~

~~5. VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT (VDEM) 1-800-468-8892~~

~~6. U. S. ENVIRONMENTAL PROTECTION AGENCY 215-814-5000~~

~~7. CHEMTREC (IF NEEDED) 1-800-424-9300~~

~~8. MONTGOMERY COUNTY SHERIFF (LOCAL EMERGENCY PLANNING COMMITTEE) 540-382-2951~~

~~9. BLACKSBURG FIRE DEPT./HOSPITAL AMBULANCE (IF NEEDED) EMERGENCY 911~~

~~10. NEW RIVER VALLEY MEDICAL CENTER AMBULANCE SERVICE (IF NEEDED) EMERGENCY 911~~

~~12. DEPARTMENT OF ENVIRONMENTAL QUALITY WASTE DIVISION 540-562-6872~~
~~(AZIZ FARAHMAND)~~

TABLE ~~4~~II.E-~~3~~4
EVALUATION CRITERIA ~~FOR~~ FOR IMPLEMENTATION ~~OF~~ OF THE CONTINGENCY PLAN

In accordance with the Contingency Plan Implementation Logic Diagram (Figure II.E-5), the following are examples of when the contingency plan would need to be implemented:

For a fire and/or explosion:

- If the fire causes a release of toxic fumes that go off plant or impacts personnel
- If the fire could spread (is not contained), thereby possibly igniting materials in other locations on-site or off-site, or could cause heat induced leaks or explosions
- If the use of fire suppressant could result in contaminated runoff that cannot be contained.
- If an explosion has or could:
    - Result in damage from flying fragments or shock waves
    - Ignite other hazardous waste at the facility
    - Release toxic materials that could cause harm to human health or the environment or cannot be contained.
- Or if a fire or explosion endangers human health or the environment for any other reason.

For spills or material releases

- If a spill endangers human health or the environment.

~~Fire and/or Explosion~~

~~• Fires causes the release of toxic fumes~~

~~• The fire could spread, thereby, possibly igniting materials in other locations on-site or off-site, or could cause heat-induced leaks or explosions~~

~~• The use of fire suppressant could result in contaminated runoff~~

~~• Explosion has or could:~~

~~– Result in danger from flying fragments or shock waves~~

~~– Ignite other hazardous waste at the facility~~

- ~~Release toxic materials~~

- ~~Fire or explosion endangers human health or the environment for any other reason~~

~~Spills or Material Releases~~

- ~~A spill could release toxic or explosive liquids, thus causing a fire or explosion hazard~~

- ~~A spill could result in off-site or on-site soil contamination and/or ground or surface water contamination~~

- ~~A spill constitutes a release of a "reportable quantity" of a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)~~

- ~~A spill endangers human health or the environment for any other reason~~

TABLE II.E-~~45~~5
SPILL RESPONSE MEASURES

The spill response program will be coordinated by the Emergency Coordinator or designated representative. Guidelines are provided concerning safety, containment, evaluation, notification, treatment and monitoring as related to each spill incident.

1. Safety

    a. Evaluate the hazard of the spilled chemical to personnel that may be involved in containment, clean up, treatment and monitoring operations.

    b. Assure proper clothing and protective equipment is available and used by personnel involved in the spill response.

2. Containment

    a. Establish the expected flow path of the spilled material.

    b. Locate the nearest proposed damming site.

    c. Erect a dam –- notify Roads and Grounds regarding construction of dam.

3. Evaluation of Spill Extent

    a. Obtain pH readings at site if chemical spilled was an acid or base.

    b. Confirm stoppage of leak at source.

4. Initial Notification

    a. Delegated to the Emergency Coordinator

    b. Notify appropriate agencies (see Notification Action Summary)

5. Treatment

    a. Straw or other absorbers will be supplied to entrap hazardous wastes that are spilled. Sites/locations within the plant containing straw and other entrapment materials are controlled by Roads and Grounds.

6. Monitor Program

Upon receiving notification of an accidental loss to the industrial sewer or surface streams, personnel will obtain grab samples at specified locations and time intervals as determined by the Emergency Coordinator.

a. In-Plant Sites

i. Suggested sampling sites will be determined based on the location of the spill

ii. Samples will be collected at internal locations as designated.

b. New River Site

i. Sampling at the New River site will be performed on a staggered basis since the river flow approximates one mile per hour. Sampling will be performed by the operator at Building 4330.

7. Final Treatment

a. Determine disposition of impounded material depending on type and quantity of spill. Ensure EPA and DEQ concur with disposition.

b. Provide monitoring for duration of disposition.

Explosion fragments and materials as well as contaminated soils will be analyzed for explosives and nitroglycerine using either the RFAAP TAL's VELAP approved methods, or, if targeted for offsite analysis, SW846 Method 8332 for explosives and 8330 for nitroglycerine. If the analyses indicate that the materials are reactive, they will be handled as hazardous waste. Hazardous soils and residual reactive wastes will be treated at the OB Ground or sent off-site for disposal. If the analyses indicate that the materials are non-reactive, they will be decontaminated if necessary in ~~either~~ the decontamination oven or the decontamination incinerator on-site at Radford AAP ~~provided they are not TCLP toxic or reactive. The decontaminated materials~~ and will then be disposed of in a permitted landfill or as decontaminated scrap.~~The spill response program will be coordinated by the Emergency Coordinator. Guidelines are provided concerning safety, containment, evaluation, notification, treatment and monitoring as related to each spill incident.~~

~~1. Safety~~

~~a. Evaluate the hazard of the spilled chemical to personnel which may be involved in clean up, treatment and monitoring operations.~~

b. Assure proper clothing and protective equipment is available and used by personnel involved in the spill response.

2. Containment

a. Establish the expected flow path of the spilled material.

b. Locate the nearest proposed damming site.

c. Erect a dam - notify Roads and Grounds regarding construction of dam.

3. Evaluation of Spill Extent

a. Obtain pH meter readings at site if chemical spilled was an acid or base.

b. Confirm stoppage of leak at source.

4. Initial Notification

a. Delegated to the Emergency Coordinator

b. Notify appropriate agencies (see Notification Action Summary).

5. Treatment

a. Straw or other absorbent materials will be supplied to entrap hazardous wastes which are spilled. Sites/locations within the plant containing straw and other entrapment materials are controlled by Roads and Grounds.

TABLE 5
SPILL RESPONSE MEASURES (Continued)

6. Monitoring Program

Upon receiving notification of an accidental loss to the industrial sewer or surface streams, personnel will obtain grab samples at intervals and from the points described by the Emergency Coordinator.

a. In-Plant Sites

1. Suggested sampling sites will be determined based on the location of the spill

2. Samples will be collected at intervals/.locations designated.

b. New River Sites

Sampling at the New River sites will be performed on a staggered basis since the river flow approximates one mile per hour. Sampling will be performed.

7. Final Treatment

a. Determine disposition of impounded material depending on type and quantity of spill. Ensure EPA and DEQ concur with disposition.

b. Provide monitoring for duration of disposition.

Explosion fragments and materials and possible propellant-contaminated materials and soils will be analyzed using SW846 Method 8332 for explosives and 8330 for nitroglycerine. If the analyses indicate that the materials are reactive, they will be handled as hazardous waste. Hazardous soils and residual reactive wastes will be treated at the OB Ground or sent off-site for disposal. If the analyses indicate that the materials are non-reactive, they will be disposed of as solid waste.

TABLE 6
EMERGENCY EQUIPMENT LOCATIONS AT RFAAP

Location No. on Figure 5	Location Description	Equipment Available
1	Bldg. 1034, Electric Shop	Raincoats, rubber gloves, respirators
2	Bldg. 1039	Self-contained breathing apparatus (2)
3	Roads and grounds	Respirators, goggles, air fed respirators, safety belts, shoe cleats, air compressors (250 and 700 CFM ratings), portable pumps (50, 100 and 700 GPM capacities), cranes, bulldozers, movers, graders, tow tractors, portable electric generators, backhoes, front-end loaders, portable tankers, absorbent pads, booms, cloths
5	Bldg. 1999	Farm wagon with spill control materials
6	Bldg. 222, Fire Department	1 ladder truck, 1 engine, 1 utility truck, 1 tanker, 1 brush truck, 1 HAZMAT trailer with response gear, 3 boats with trailers
7	Bldg. 4018	Boats, motors, hoses, nozzles and other supply equipment

TABLE 6
EMERGENCY EQUIPMENT AT RFAAP (Continued)

8	Bldg. 201, Main Laboratory	nitroglycerine remover
9	Bldgs. 440 and 441 (incinerators)	Halon 1211 Model 1300 Hal, type ABC fire extinguishers
10	Bldg. 442	Telephone access
11	Bldg. 4601-7	Telephone access and spill cleanup equipment

~~APPENDIX A~~

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~~RFAAP DISASTER CONTROL PLAN AND~~
~~RFAAP PLANT PROTECTION PLAN~~

RFAAP DISASTER CONTROL PLAN
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~~APPENDIX B~~

~~HAZARD CLASSIFICATION PLACARD SYSTEM~~

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~~Appendix B~~ ~~Appendix B from Contingency Plan submitted with ATK ltr dtd 12 Jan. 2001~~

APPENDIX ~~C~~II.E-1

~~EXAMPLE~~ MUTUAL ASSISTANCE AGREEMENTS

TABLE 1
MUTUAL ASSISTANCE AGREEMENTS WITH LOCAL MUNICIPALITIES

ENTITY	DATE OF AGREEMENT	SERVICES INCLUDED
Twin Community Volunteer Fire Department	August 2, 2011	Firefighting equipment and personnel
City of Radford	July 11, 2011	Firefighting equipment and personnel
Fairlawn Volunteer Fire Company	July 11, 2011	Firefighting equipment and personnel
Riner Volunteer Fire Company	June 30, 2011	Firefighting equipment and personnel
Riner Volunteer Rescue Squad	June 30, 2011	Emergency medical services
Town of Dublin	November 18, 2010	Firefighting equipment and personnel
Pulaski County Board of Supervisors	January 22, 2007	FCC licensed radio frequencies for communication
Town of Christiansburg	October 4, 2006	Firefighting equipment and personnel
Community of Riner	August 31, 2006	Firefighting equipment and personnel
Federal Bureau of Investigation, Richmond Division	June 9, 2003	Law enforcement for major disruptions or special threats
Town of Blacksburg	October 8, 2002	Firefighting equipment and personnel
Town of Pulaski	2002	Firefighting equipment and personnel
Community of Long Shop/McCoy	September 10, 2002	Firefighting equipment and personnel
United States Army Research, Development, and Acquisition Information Services Activity	June 26, 1992	Force-Protection Support Responsibilities

TABLE 2
MUTUAL ASSISTANCE AGREEMENTS WITH LOCAL MEDICAL FACILITIES

ENTITY	DATE OF AGREEMENT	SERVICES INCLUDED
LewisGale Hospital Montgomery	August 18, 2011	Emergency medical services
Carilion New River Valley Medical Center	July 14, 2011	Emergency medical services
LewisGale Hospital Pulaski	July 7, 2011	Emergency medical services
Pulaski Community Hospital	September 14, 2010	Emergency medical services

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~~**Appendix C**~~ ~~Appendix C from Contingency Plan submitted with ATK ltr dtd 12 Jan. Sept. 2001~~

Appendix II.E-2

Identification of Temporary Hazardous Energetic Waste Storage Locations
(Less than 90 day storage areas)

TEMPORARY HAZARDOUS ENERGETIC WASTE STORAGE LOCATIONS (LESS THAN 90 DAY STORAGE AREAS)

ACCUMULATION AREA	BUILDING NUMBER
Nitroglycerin	4912-53, 4912-54, 4912-49
Rocket	4912-52, 4913, 4924-2, 4912-44
Magazine	1916, 1921, 1952, 4601-7, 1918, 1917, 1955
Incinerators	430
Green Lines	3671, 3613, 3514, 1761, 1764
Finishing	1702, 1879, 4945-1, 1763, 1760
First Rolled Powder	7106-3, 7109-1
Fourth Rolled Powder	9309-4 Sec B-Bay 7, 9310-2 Sec G-Bay 3, 9310-2 Sec H-Final Pack, 9320-4, 9334-16
New River Energetics (NRE)	1602, 1603
Medium Caliber Ammunition Lap	4912-32, 4327-1, 4327-3, 4327-8, D4327-1
Sample Prep	7123*Room 9, Magazine 225
Main Laboratory Building 201	Rooms 5, 8, 14 and porch of Room 9
IBL (Internal Ballistic Laboratory)	6401

Appendix II.E-3

Contingency/Emergency Plan Requirements for Hazardous Waste Management
in the RFAAP Waste Accumulation Areas and the Explosive Waste Incinerators

Contingency/Emergency Plan Requirements for Hazardous Waste Management in the RFAAP Waste Accumulation Areas and the Explosive Waste Incinerators

Accumulation / Treatment Area	Site Emergency Potential	Location by Building Number	Type of Management	Waste Properties [1]	Emergency Potential	Spill/Leakage Response
Nitroglycerin	Ignitable and reactive liquids and sawdust; may contain glycol liquids.	4912-53, 4912-54, 4912-49	< 90-day containers	D001, D003	Leaking/damaged containers, contamination, skin irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
Rocket	Propellant with Nitrocellulose, Nitrate Esters and Lead	4912-52, 4913, 4924-2, 4912-44	< 90-day containers	D001, D003, D008	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
Magazine	Specialty Products Waste or Propellant with Nitrocellulose, Nitrate Esters and/or Nitroguanidine; may contain lead or perchlorate salts or solid explosives or dinitrotoluene or Appendix VIII[2] Constituents.	1916, 1921, 1952, 4601-7, 1918, 1917, 1955	< 90-day containers	D001, D003, D004-D010, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.

Accumulation / Treatment Area	Site Emergency Potential	Location by Building Number	Type of Management	Waste Properties [1]	Emergency Potential	Spill/Leakage Response
Explosive waste incinerators	Products from Nitroglycerin, Rocket, Magazine, Green Lines, Finishing, First Rolled Powder, Fourth Rolled Powder, NRE, Medium Caliber Ammunition Lap, Sample Prep, Main Laboratory Building 201, and IBL.	430	Thermal treatment, tank storage, and < 90-day containers	D001, D003, D004-D011, D030	Leaking or spilled waste container, waste handling equipment failure, pump failure, ruptured piping, tank failure, fire, explosion, general releases, inhalation hazards, skin irritations, or burns	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions. Equipment failure-shutdown or isolate affected equipment, contact supervision for further instructions.
Green Lines	Propellant with Nitrocellulose, Nitrate Esters and/or Nitroguanidine; may contain lead or perchlorate salts or solid explosives or dinitrotoluene or Appendix VIII[2] Constituents.	3671, 3613, 3514, 1761, 1764	< 90-day containers	D001, D003, D008, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
Finishing	Propellant with Nitrocellulose, Nitrate Esters and/or Nitroguanidine; may contain lead or perchlorate salts or solid explosives or dinitrotoluene or Appendix VIII[2] Constituents.	1702, 1879, 4945-1, 1763, 1760	< 90-day containers	D001, D003, D008, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.

Accumulation / Treatment Area	Site Emergency Potential	Location by Building Number	Type of Management	Waste Properties [1]	Emergency Potential	Spill/Leakage Response
First Rolled Powder	Propellant with Nitrocellulose, Nitrate Esters and Lead	7106-3, 7109-1	< 90-day containers	D001, D003, D008	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
Fourth Rolled Powder	Propellant with Nitrocellulose, Nitrate Esters and Lead	9309-4 Sec B-Bay 7, 9310-2 Sec G-Bay 3, 9310-2 Sec H-Final Pack, 9320-4, 9334-16	< 90-day containers	D001, D003, D008	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
New River Energetics (NRE)	Specialty Products Waste	1602, 1603	< 90-day containers	D001, D003, D004-D010, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
Medium Caliber Ammunition Lap	Energetic materials from manufacturing cartridges	4912-32, 4327-1, 4327-3, 4327-8, D4327-1	< 90-day containers	D001, D003	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop

Accumulation / Treatment Area	Site Emergency Potential	Location by Building Number	Type of Management	Waste Properties [1]	Emergency Potential	Spill/Leakage Response
						operations; contact supervision for further instructions.
Sample Prep	Miscellaneous Waste	7123*Room 9, Magazine 225	< 90-day containers	D001, D003, D004-D011, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
Main Laboratory Building 201	Miscellaneous Waste	Rooms 5, 8, 14 and porch of Room 9	< 90-day containers	D001, D003, D004-D011, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.
IBL (Internal Ballistic Laboratory)	Specialty Products Waste	6401	< 90-day containers	D001, D003, D004-D010, D030	Leaking/damaged containers, contamination, skin burns or irritation, inhalation hazards, gaseous releases, fire, explosion	Liquid spills-contain with cloth wipes, Pigs®, or sawdust; contact supervision for further instructions. Solid spills-stop operations; contact supervision for further instructions.

[1] Codes shown represent those RCRA codes that the waste **may** exhibit. Not all of the specified codes may apply to every container of waste in the specified location.

[2] 40 CFR 261, Appendix VIII